

# Feedback Form

## Small Hydro Program Design, March 2022

### Feedback Provided by:

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To promote transparency, feedback submitted will be posted on the IESO webpage unless otherwise requested by the sender.

Following the March 30<sup>th</sup> and April 1<sup>st</sup> 2022 Small Hydro Program Design Outreach Session, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on the following discussed items. Background information related to these feedback requests can be found in the presentation, which can be accessed from the [engagement web page](#).

**Please submit feedback to [engagement@ieso.ca](mailto:engagement@ieso.ca) by April 19<sup>th</sup> 2022.** If you wish to provide confidential feedback, please mark the document "Confidential". Otherwise, to promote transparency, feedback that is not marked "Confidential" will be posted on the engagement webpage.

## Small Hydro Program – Engagement Approach

Topic	Feedback
What questions or feedback do you have about the IESO's engagement approach?	Appreciate IESO reaching out to small hydro producers to provide feedback and input. Sessions were a good length, presentations and discussion was to the point effectively used the allocated time.

## Small Hydro Program – Principles & Goals

Topic	Feedback
What questions or feedback do you have on the design goals for the program?	Currently the directive from the Minister of Energy is specific to IESO and OEFC contracts that expire prior to December 31, 2030. There are contracts expire post December 31, 2030, it's respectively requested that consideration be given to applying a similar treatment or options to contracts that expire post December 31, 2030.
What questions or feedback do you have on the principles that the design is founded on? (focus on value, promote competition, incent market-driven operations and allow for flexibility in future system operation).	Existing nuclear facilities such as Pickering are being decommissioned and use of electric vehicles is increasing. The need to replace existing electricity supplies being decommissioned and plan for new demands from electric cars is near term. This will create a need for base load energy, water power facilities are effective at providing a base load supply of electricity. Solutions for the waterpower industry need to simple and straight forward. Complicated procurement approaches add cost and needless complexity. Current waterpower contracts such as HCI contracts currently provide good value to Ontario residents properly balancing the cost to produce electricity, maintain facilities with the need to provide value to Ontario residents. Existing HCI contract compensate producers at approximately 8 cent/kilowatt hour and sell electricity at 16 cents/kilowatt hour. The small hydro waterpower program currently provide good value.

## Small Hydro Program – Design Concepts

Topic	Feedback
<p>What questions or feedback do you have relating to <b>Design Concept #1: Capacity Payments</b></p>	<p>The capacity payment approach for small hydro producers seems overly complex. The current approach used in existing contracts of payment based on production \$/MWh is preferred for small producers. It incents producers to optimize their operation to produce electricity, it is straightforward if a producer is not producing they do not receive compensation. They are paid for the volume of energy they produce and there is an on peak and off peak rate to incent production during specific periods of the day. Suggestion is to use the current approach of \$/MWh for small hydro producers tranching could provide a means of fitting contract payment options to the size of hydro producing facility.</p>
<p>What questions or feedback do you have relating to <b>Design Concept #2: Dispatchability</b></p>	<p>Most small hydro facilities are best suited to provide base load production of electricity. They were not originally designed to be dispatchable facilities and cannot be easily adapted. There is a need for base load electricity. Small hydro waterpower facilities are best suited to provide base load production. There are also environmental considerations, maintaining water flow consistency to the environment that have to be considered making dispatchability much more complex and costly to achieve. Suggestion is to keep approaches for small hydro waterpower producers simply, constant supply contracts. For producers that can provide dispatchability consider the concept of an adder or tranch of dispatchable contracts for producers that can provide dispatchability. Dispatchability is possibly better suited to other types of electricity supply such as wind or solar sources, sources where dispatchability would have little or less impact on the environment.</p>
<p>Is your facility currently dispatchable?</p>	<p>No our currently facilities are designed to be constant supply facilities. Hydro production is not the primary objective of the dams we operate. River flow augmentation and flood</p>

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	management are the primary objectives of the dams operated by GRCA with hydro production facilities.
<p>If your facility is currently not dispatchable, is there an interest in becoming dispatchable? What would be required to become dispatchable and what are the barriers (if any)?</p>	<p>There is not an interest in becoming a dispatchable facility. It would require implementation of a much more complex operating system, would put much more wear and tear on operating equipment and more risk of downstream environmental and public safety impacts. One consideration may be to add energy storage or dispatchable sources such as wind or solar to existing small hydro sites where the connection to the grid is not fully utilized. Additional dispatchable sources or energy storage could allow fuller utilization of existing connections to the grid leveraging and optimizing existing connection infrastructure. The business case for adding dispatchable sources or energy storage to existing small hydro facilities would have to be further investigated to determine if there is a feasible business case.</p>
<p>What questions or feedback do you have relating to <b>Design Concept #3: Tranching</b></p>	<p>Tranching is a good concept; it allows approaches to be adapted to better fit the range of producers. One size (one type of contract) does not fit all of the government or producer interests or needs.</p>
<p>What characteristics would you consider to be defining features of your operations or facilities as it relates to potential criteria for contract payments?</p>	<p>Consideration should be given to the size of facility. Smaller facilities are better suited for simple power purchase agreement based on \$/MWh. Consideration of a tranch of small producers under a specific name plate production possibly 1 MW or 5 MW would be appreciated. Important to keep contracts simple and recognize small hydro waterpower is likely best suited for base load supply.</p>
<p>What questions or feedback do you have relating to <b>Design Concept #4: Investment?</b></p>	<p>Investment is ongoing. The assets are maintained to extend their life, maintain efficiency, provide reliable operation and protect</p>

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	<p>the value of the capital investment. Future contracts provide certainty for continued investment in both the facility itself and in the supply and service industry providing services to the small hydro facilities. Contract certainty also provides a more consistent reinvestment and steadier stream of work (maintenance and upgrades) over time rather than a boom and a bust cycle. In short, it provides certainty for the service industries supporting the small hydro facilities.</p>
<p>Have you considered adding an on-site battery to your facility? If so, what stage of development are you in? Is there potential for Indigenous and/or community ownership?</p>	<p>No consideration has been given to onsite batteries at GRCA facilities. Conservation Authorities are none share not for profit organizations form by member municipalities therefore there is indirect linkage to the local community community however; ownership is wholly with the GRCA.</p>
<p>Are you aware of your sustaining capital requirements over the next 5 years?</p>	<p>Yes, estimates could be prepared. Major upgrades have been completed in the past two years and historical of life cycle maintenance is maintained.</p>
<p>Have you considered any upgrades or capital projects at your facility? If so, what stage of development are you in? Is there potential for Indigenous and/or community ownership?</p>	<p>Major maintenance refurbishments have been completed in the past two years. One facility has the potential for increased production of 300 kw however is limited by grid space on the HydroOne network. The turbine, generator and switch gear are capable of additional output with upgraded cabling and an upgraded transformer and amended connection agreement with HydroOne.</p>
<p>What questions or feedback do you have relating to <b>Design Concept #5: Contract Length</b>?</p>	<p>Contract length provides certainty and certainty for financial institutions providing financing and certainty for long term capital planning. Contracts provide more certainty than programs.</p>
<p>What questions or feedback do you have relating to a program review in 2026?</p>	<p>How will the current review factor into the review in 2026? Will the 2026 contract review</p>

Topic	Feedback
	provide options for contracts that expire post 2030?

## Small Hydro Program – Other Design Ideas

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Are there any other design ideas for the development of a Small Hydro Program that should be considered?	Consider exploring business cases or provide financing for pilots to explore business cases of adding battery storage or additional electricity sources other than water to better utilize existing grid connections. An example would be adding dispatchable solar sources to existing small hydro facilities, provided a business case could be made and value could be provided to consumers.

## Small Hydro Program – Challenges

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Are there challenges that you foresee in transitioning to a new contract structure? What are these challenges?	The challenges are the unknowns and complexity of the contract structure and compensation agreements and length of contract. To date concepts have been discussed, some potential contract examples would be useful. Keep contracts simple for small producers based on \$/MWh and constant supply contracts to provide base load is desirable.
If you expect any challenges in transitioning to a new contract structure, do you have any suggestions on how the IESO can assist in the transition or reduce any anticipated barriers?	Provide details of new contract rules well in advance for contract expiry dates. Recognize dispatchability is not feasible for the majority of small hydro facilities is important.

## General Comments/Feedback

Thank you for the opportunity to provide feedback it is sincerely appreciated. The power purchase contracts with the IESO for two of the facilities GRCA operates are valued contracts. An overall observation after attending the engagement meetings is Ontario will need additional electricity as

some existing electricity supplies are decommissioned (Pickering Nuclear) and as demand for electricity increases in response to new demand from electric vehicles and increased population. Based on this premise a suggestion is to consider identifying the electrical demand needs in categories, possibly base load, dispatchable and peaking. Then either identify what types of electricity supplies best fit these categories. As stated in the comments provided the majority of small hydro waterpower facilities are best suited in the base load category. Other renewables such as wind and solar may better fit in the dispatchable and peaking load categories as an example. It is important to keep contacts with small hydro water power producers simple and straightforward, contracts for electricity following past practice of \$/MWh are preferred for small hydro facilities like the ones operated by the GRCA. Existing small hydro facilities are already providing good value to Ontario residences and the Ontario economy through existing HCI contracts, rates in these contracts strike a balance reflecting the cost to produce electricity and maintain the hydro facilities while providing good value to residents in Ontario and the Ontario economy as a whole. Operation of small hydro facilities provides auxiliary benefits in the form of jobs and value to the local economies where they are located. Hydro contracts provide more certainty and security to the hydro producer than simply a government hydro program. Contract length is important a 20-year contract length provides a good balance of certainty to the producer and provides certainty to the IESO and the Ontario ratepayer, locking in a price for twenty years is a hedge against future rising costs if supplies do not meet the demand. Longer-term contracts are in the best interest of both parties, the producer and the IESO who is ultimately serving the Ontario ratepayer. There are power purchase contracts that expire post 2030, providing certainty for the potential renewal options for contracts that expire post 2030 would be appreciated. Thank you again for the opportunity to provide comments.